In the claims:

Please amend the claims as shown below:

1. (Currently amended) A method for ~~the~~ an oxygen gas delignification of cellulose pulp in a gas/fluid suspension in which the oxygen gas delignification takes place in a reactor system with ~~one or several~~ oxygen gas reactor~~s~~, comprising:

~~in which delignification chemicals such as~~

providing delignification chemicals in ~~oxygen gas at~~ such a quantity that oxygen gas remains present during ~~the~~ a complete reaction process in the oxygen gas reactor ~~reactors~~;

together with the oxygen gas, providing alkali at an amount that ensures that a ~~the~~ pH value in the oxygen gas reactor remains over 9;

adding the oxygen gas and alkali upstream of ~~are added at least before a first~~ the oxygen gas reactor; ~~(101) c h a r a c t e r i s e d i n that~~

measuring a ~~the~~ temperature of the cellulose pulp ~~is measured~~ at ~~the~~ a start of the oxygen gas delignification at ~~at least~~ two different locations ~~with the aim of determining the~~ to determine an initial consumption of delignification chemicals that have reacted in ~~the~~ a fluid phase,

~~which~~ using the determined initial consumption of delignification chemicals ~~is used~~ to control or adjust ~~the charged~~ an amount of at least one delignification chemical charged to the oxygen gas delignification ~~of at least one delignification chemical~~,

reducing or increasing an amount of delignification chemicals charged ~~such that the charged amount of chemicals can be reduced~~ while at the same time ~~guaranteeing the presence~~ ensuring a presence of delignification chemicals during the complete reaction process.

2. (Currently amended) The method according to claim 1, ~~c h a r a c t e r i s e d i n that~~ wherein ~~the~~ positions of ~~the~~ measurements between two subsequent temperature measurements correspond to positions between which the cellulose pulp has had a retention time in the reactor system between 10 seconds and 30 minutes~~, preferably 1 10 minutes~~.

3. (Currently amended) The method according to ~~either claim 1 and 2, c h a r a c t e r i s e d i n that~~ claim 1 wherein a ~~the~~ first temperature measurement ~~(T1)~~ is made at a location after the addition of oxygen gas.

4. (Currently amended) The method according to ~~either claim 1 and 2, c h a r a c t e r i s e d i n that~~ claim 1 wherein a ~~the~~ first temperature measurement ~~(T1)~~ is made at a location before the addition of oxygen gas.

5. (Currently amended) The method according to ~~any one of claims 1-4, c h a r a c t e r i s e d i n that~~ claim 1 wherein two temperature measurements are made and that ~~the~~ a derivative between the first and the second temperature measurement~~s~~ is used to control ~~the~~ an ~~charged~~ amount charged of at least one delignification chemical.

6. (Currently amended) The method according to ~~any one of claims 1-4, c h a r a c t e r i s e d i n that~~ claim 1 wherein ~~the~~ temperature measurements are coupled to an oxygen gas trend~~, which oxygen gas trend~~ that is used to control ~~the~~ an ~~charged~~ amount charged of at least one delignification chemical.

7. (Currently amended) A system for ~~the~~ an oxygen gas delignification of cellulose pulp in a gas/fluid suspension in which the oxygen gas delignification takes place in a

reactor system, comprising:
an oxygen gas reactor having delignification chemicals contained therein;
an alkali addition location for adding alkali to the system, the alkali addition location being upstream of the oxygen gas reactor;
a delignification chemicals addition location for adding delignification chemicals to the system, the delignification chemicals addition location being upstream of the oxygen gas reactor;
~~with one or several oxygen gas reactors, in which delignification chemicals such as oxygen gas at such a quantity that oxygen gas remains present during the complete reaction process in the reactors together with alkali at an amount that ensures that the pH remains over 9 are added at least before a first oxygen gas reactor (101) — c h a r a c t e r i s e d i n that~~
a first temperature sensor located adjacent to the delignification chemicals addition location;
a second temperature sensor located in the reactor system downstream of the first temperature sensor;
the first and second temperature sensors being electrically connected to a control unit;
the control unit being electrically connected to a control valve; and
the control valve being in operative engagement with a delignification chemicals supply to control a flow of delignification chemicals to the delignification chemicals addition location.
~~two sensors (113) for temperature measurement are arranged after each other in the direction of flow of the pulp with physical locations in the system that ensure a retention time of 1-10 minutes, the sensors (113) transfer the measured data via means for signal transmission to a suitable control unit (111), which control unit (111) calculates the amount of~~

~~delignification chemicals consumed, the control unit (111) subsequently regulates a signal controlled valve (112) for the control of the amount of at least one delignification chemical added.~~

8. (Currently amended) The system according to claim 7 ~~c h a r a c t e r i s e d i n that~~ wherein the first temperature sensor ~~(113)~~, viewed from ~~the direction of flow~~ a flow direction of the cellulose pulp through the system, is located immediately downstream of the delignification chemicals addition location. ~~is placed at a location directly after the addition of oxygen gas.~~

9. (Currently amended) The system according to claim 7 ~~c h a r a c t e r i s e d i n that~~ wherein the first temperature sensor ~~(113)~~, viewed from ~~the direction of flow~~ a flow direction of the cellulose pulp through the system, is located immediately upstream of the delignification chemicals addition location. ~~is placed at a location directly before the addition of oxygen gas.~~